



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2014-0921; Directorate Identifier 2014-NM-073-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede Airworthiness Directive (AD) 2013-14-05, which applies to certain The Boeing Company Model 747-400 and 747-400F series airplanes. AD 2013-14-05 currently requires repetitive inspections of the longeron extension fittings for cracking, and related investigative and corrective actions if necessary. AD 2013-14-05 also provides optional terminating action for the repetitive inspections. Since we issued AD 2013-14-05, we determined that more work is necessary on airplanes on which a terminating action (permanent repair, longeron extension fitting replacement, or modification) was accomplished. This proposed AD would continue to require the requirements of AD 2013-14-05, and would add new repetitive high frequency eddy current (HFEC) inspections of any modified, repaired, or replaced longeron extension fitting for cracking, and applicable related investigative and corrective actions if necessary. We are proposing this AD to detect and correct cracks in the longeron extension fittings, which can become large and adversely affect the structural integrity of the airplane.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this proposed AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0921; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800-647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Nathan Weigand, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6428; fax: 425-917-6590; email: Nathan.P.Weigand@faa.gov.

**SUPPLEMENTARY INFORMATION:**

**Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2014-0921; Directorate Identifier 2014-NM-073-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

**Discussion**

On June 25, 2013, we issued AD 2013-14-05, Amendment 39-17510 (78 FR 43763, July 22, 2013), for certain The Boeing Company Model 747-400 and 747-400F series airplanes. AD 2013-14-05 requires repetitive inspections of the longeron extension fittings for cracking, and related investigative and corrective actions if necessary. AD 2013-14-05 also provides for optional terminating action for the repetitive inspections. AD 2013-14-05 resulted from reports of cracking in the outboard flange of the longeron extension fittings, which attach to the wing-to-body fairing support frame.

We issued AD 2013-14-05 to detect and correct cracks in the longeron extension fittings, which can become large and adversely affect the structural integrity of the airplane.

**Actions Since AD 2013-14-05, Amendment 39-17510 (78 FR 43763, July 22, 2013) was Issued**

Since we issued AD 2013-14-05, Amendment 39-17510 (78 FR 43763, July 22, 2013), we determined that more work is necessary on airplanes that accomplished a permanent repair, longeron extension fitting replacement, or preventive modification (the terminating actions specified in AD 2013-14-05).

**Relevant Service Information**

We reviewed Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014. For information on the procedures and compliance times, see this service information at <http://www.regulations.gov> by searching for Docket No. FAA-2014-0921.

**FAA's Determination**

We are proposing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

**Proposed AD Requirements**

Although this proposed AD does not explicitly restate the requirements of AD 2013-14-05, Amendment 39-17510 (78 FR 43763, July 22, 2013), this proposed AD would retain all of the requirements of AD 2013-14-05. Those requirements are referenced in the service information identified previously, which, in turn, is referenced in paragraphs (g), (h)(1), and (j) of this proposed AD. This proposed AD would require additional repetitive HFEC inspections of the left and right longeron extension fittings for cracking, and applicable related investigative and corrective actions, for airplanes that have previously accomplished a permanent repair, longeron extension fitting

replacement, or preventive modification, as identified in Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012.

The phrase “related investigative actions” is used in this proposed AD. “Related investigative actions” are follow-on actions that (1) are related to the primary actions, and (2) further investigate the nature of any condition found. Related investigative actions in an AD could include, for example, inspections.

The phrase “corrective actions” is used in this proposed AD. “Corrective actions” are actions that correct or address any condition found. Corrective actions in an AD could include, for example, repairs.

### **Differences Between this Proposed AD and the Service Information**

Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014, specifies to contact the manufacturer for instructions on how to repair certain conditions, but this proposed AD would require repairing those conditions in one of the following ways:

- In accordance with a method that we approve; or
- Using data that meet the certification basis of the airplane, and that have been approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) whom we have authorized to make those findings.

### **Clarification of Terminating Actions for Certain Inspections**

Paragraph (h)(1) of this proposed AD specifies that if the terminating action is done “before the effective date of this AD” in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012, it terminates the inspections in paragraph (g) of this proposed AD. In paragraph (h)(2) of this proposed AD we specify that the terminating action if done “on or after the effective date of this AD” must be done in accordance with the Accomplishment Instructions of

Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014, except as required by paragraph (k)(2) of this AD.

### Costs of Compliance

We estimate that this proposed AD affects 41 airplanes of U.S. registry.

We estimate the following costs to comply with this proposed AD:

#### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
HFEC inspection [retained action from AD 2013-14-05, Amendment 39-17510 (78 FR 43763, July 22, 2013)]	32 work-hours X \$85 per hour = \$2,720 per inspection cycle	\$0	\$2,720 per inspection cycle	\$111,520 per inspection cycle
Terminating action for certain inspections [retained action from AD 2013-14-05, Amendment 39-17510 (78 FR 43763, July 22, 2013)]	479 work-hours X \$85 per hour = \$40,715	\$0	\$40,715	\$1,669,315
HFEC inspection [new action]	32 work-hours X \$85 per hour = \$2,720 per inspection cycle	\$0	\$2,720 per inspection cycle	\$111,520 per inspection cycle

We estimate the following costs to do any necessary replacements that would be required based on the results of the proposed inspection. We have no way of determining the number of aircraft that might need this replacement:

#### On-condition costs

Action	Labor cost	Parts cost	Cost per product
Replacement	464 work-hours X \$85 per hour = \$39,440	\$0	\$39,440

According to the manufacturer, some of the costs of this proposed AD may be covered under warranty, thereby reducing the cost impact on affected individuals. We do

not control warranty coverage for affected individuals. As a result, we have included all costs in our cost estimate.

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We have determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

#### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

#### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

#### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2013-14-05, Amendment 39-17510 (78 FR 43763, July 22, 2013), and adding the following new AD:

**The Boeing Company:** Docket No. FAA-2014-0921; Directorate Identifier 2014-NM-073-AD.

#### **(a) Comments Due Date**

The FAA must receive comments on this AD action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2013-14-05, Amendment 39-17510 (78 FR 43763, July 22, 2013).

#### **(c) Applicability**

This AD applies to The Boeing Company Model 747-400 and -400F series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014.



**(d) Subject**

Air Transport Association (ATA) of America Code 53, Fuselage.

**(e) Unsafe Condition**

This AD was prompted by reports of cracking in the outboard flange of the longeron extension fittings, and we determined that more work is necessary on airplanes on which a permanent repair, longeron extension fitting replacement, or modification was accomplished, as required by AD 2013-14-05, Amendment 39-17510 (78 FR 43763, July 22, 2013) could crack. We are issuing this AD to detect and correct cracks in the longeron extension fittings, which can become large and adversely affect the structural integrity of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Repetitive Inspections**

At the applicable time specified in table 1 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014: Do surface high frequency eddy current (HFEC) inspections for cracking of the left and right longeron extension fittings, and all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014, except as required by paragraph (k)(2) of this AD. Do all applicable corrective actions at the applicable time specified in table 1 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014. If no cracking is found, repeat the inspection thereafter at the intervals specified in table 1 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014, until a terminating action specified in paragraph (h) of this AD is done.

**(h) Terminating Actions for the Inspections Required by Paragraph (g) of This AD**

(1) Doing the permanent repair, longeron extension fitting replacement, or preventative modification before the effective date of this AD, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012, terminates the repetitive inspections required by paragraph (g) of this AD. Boeing Alert Service Bulletin 747-53A2860, dated December 4, 2012, was incorporated by reference in AD 2013-14-05, Amendment 39-17510 (78 FR 43763, July 22, 2013). After accomplishing the actions specified in this paragraph, the actions specified in paragraph (i) of this AD must be done at the times specified in paragraph (i) of this AD.

(2) Doing the repair (PART 4 of Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014), longeron extension fitting replacement, or modification on or after the effective date of this AD, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014, except as required by paragraph (k)(2) of this AD, terminates the repetitive inspection requirements of paragraph (g) of this AD. After accomplishing the actions specified in this paragraph, the actions specified in paragraph (i) of this AD must be done at the times specified in paragraph (i) of this AD.

**(i) Post-Modification/Repair/Replacement Inspections**

For airplanes on which any action identified in paragraph (h) of this AD has been accomplished (including if done as a corrective action required by paragraph (g) or (j) of this AD): At the applicable time specified in table 3 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014, except as required by paragraph (k)(1) of this AD, do a HFEC inspection of the left and right longeron extension fittings for cracking, as applicable, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014. Do all applicable corrective

actions at the applicable time specified in table 3 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014, except as required by paragraph (k)(2) of this AD. If no cracking is found, repeat the inspection thereafter at the interval specified in table 3 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014.

**(j) Inspection of Temporary Repair and Corrective Actions**

For airplanes on which a temporary repair as specified in Boeing Alert Service Bulletin 747-53A2860 has been done: At the times specified in table 2 of paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014, do a surface HFEC inspection of the temporary repair of the longeron extension fittings for cracking, and do all applicable corrective actions, in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014, except as required by paragraph (k)(2) of this AD. Do all applicable corrective actions before further flight.

**(k) Exceptions to the Service Information**

(1) Where Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014, specifies a compliance time “after the Revision 1 date of this service bulletin,” this AD requires compliance within the specified compliance time after the effective date of this AD.

(2) Where Boeing Alert Service Bulletin 747-53A2860, Revision 1, dated March 18, 2014, specifies to contact Boeing for repair information: Before further flight, repair using a method approved in accordance with the procedures specified in paragraph (m) of this AD.

**(l) Credit for Previous Actions**

This paragraph provides credit for the actions specified in paragraphs (g) and (j) of this AD, if those actions were performed before the effective date of this AD using

Boeing Alert Service Bulletin 747–53A2860, dated December 4, 2012, which was incorporated by reference in AD 2013-14-05, Amendment 39-17510 (78 FR 43763, July 22, 2013).

**(m) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (m)(1) of this AD. Information may be emailed to: 9-ANM-Seattle-ACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Seattle ACO to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved previously for AD 2013-14-05, Amendment 39-17510 (78 FR 43763, July 22, 2013), are approved as AMOCs for the corresponding provisions of paragraphs (g), (h), and (j) of this AD.

**(n) Related Information**

(1) For more information about this AD, contact Nathan Weigand, Aerospace Engineer, Airframe Branch, ANM-120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057-3356; phone: 425-917-6428; fax: 425-917-6590; email: Nathan.P.Weigand@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P. O. Box 3707, MC 2H-65, Seattle, WA 98124-2207; telephone 206-544-5000, extension 1; fax 206-766-5680; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on December 5, 2014.

Michael Kaszycki,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

[FR Doc. 2014-29232 Filed 12/12/2014 at 8:45 am; Publication Date: 12/15/2014]